CLAIMS

1.   A method for use in a wireless communication system, the method comprising:

configuring a first device having a smart antenna to selectively allow a second device to operatively associate with a beam downlink transmittable to said second device using said smart antenna;

configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna;

configuring said first device to determine if said associated second device should operatively associate with a different beam downlink transmittable using said smart antenna based on said determined information; and

if said associated second device should operatively associate with a different beam, then configuring said first device to allow said second device to operatively associate with said different beam.

2.   The method as recited in Claim 1, wherein said first device includes an access point device and said second device includes a client device.

3.   The method as recited in Claim 1, wherein configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna further includes:

configuring said first device to be capable of receiving uplink transmittable messages through said smart antenna;

configuring said first device to be capable of passively gathering signal parameter information from a plurality of said uplink transmittable messages.

4.   The method as recited in Claim 1, wherein configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna further includes:

configuring said first device to be capable of receiving at least one uplink transmittable message through said smart antenna;

configuring said first device to actively probe said second device by outputting a signal suitable for causing said smart antenna to transmit at least one downlink transmittable message over at least said different beam; and

configuring said first device to gather signal parameter information from said least one uplink transmittable message.

5.   The method as recited in Claim 4, wherein configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna further includes:

configuring said first device to be capable of receiving a plurality of uplink transmittable messages through said smart antenna;

configuring said first device to actively probe said second device by outputting a signal suitable for causing said smart antenna to transmit at least one downlink transmittable message separately over each of a group of beams comprising said beam and said different beam; and

configuring said first device to gather signal parameter information from each of said plurality of uplink transmittable messages.

6.   The method as recited in Claim 1, wherein configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna further includes:

configuring said first device to be capable of determining information about a current position of said second device relative to said smart antenna.

7.   The method as recited in Claim 1, wherein configuring said first device to determine if said associated second device should operatively associate with said different beam downlink transmittable using said smart antenna based on said determined information further includes:

configuring said first device to be capable of comparing said determined information to corresponding beam association threshold information.

8.   The method as recited in Claim 1, wherein configuring said first device to allow said second device to operatively associate with said different beam further includes at least one of the following:

configuring said first device to identify that said second device is allowed to operatively associate with said different beam; and

configuring said first device to identify that said second device is not allowed to operatively associate with said beam.

9.   A method for use in a wireless communication system, the method comprising:

determining if a client device that is currently operatively associated with a beam that is being downlink transmitted to said client device from an access point device using a smart antenna should instead be operatively associated with a different beam downlink transmitted from said smart antenna based on information determined from at least one uplink transmission received from said client device through said smart antenna; and

if determined that said associated client device should be operatively associated with a different beam, then causing said access point device to force said client device to operatively associate with said different beam.

10. The method as recited in Claim 9, wherein determining if said client device that is currently operatively associated with said beam should instead be operatively associated with said different beam further includes:

with said access point device, receiving uplink transmittable messages from said client device through said smart antenna and passively gathering signal parameter information from a plurality of said uplink transmittable messages.

11. The method as recited in Claim 9, wherein determining if said client device that is currently operatively associated with said beam should instead be operatively associated with said different beam further includes:

causing said access point device to transmit at least one probe message to said client device over at least said different beam;

receiving at least one uplink transmitted probe response message in response to said probe message through said smart antenna; and

gathering signal parameter information from said probe response message.

12. The method as recited in Claim 11, wherein determining if said client device that is currently operatively associated with said beam should instead be operatively associated with said different beam further includes:

comparing said signal parameter information to corresponding beam association threshold information.

13.   The method as recited in Claim 11, wherein determining if said client device that is currently operatively associated with said beam should instead be operatively associated with said different beam further includes:

causing said first device to transmit at least one downlink transmitted probe message separately over each of a group of beams comprising said beam and said different beam;

receiving a plurality of corresponding uplink transmitted prove response messages through said smart antenna; and

gathering signal parameter information from each of said plurality of probe response messages.

14.   The method as recited in Claim 13, wherein determining if said client device that is currently operatively associated with said beam should instead be operatively associated with said different beam further includes:

comparing said signal parameter information to corresponding beam association threshold information.

15.   The method as recited in Claim 9, wherein determining if said client device that is currently operatively associated with said beam should instead be operatively associated with said different beam further includes:

determining information about a current position of said client device relative to said smart antenna.

16. The method as recited in Claim 9, wherein causing said access point device to force said client device to operatively associate with said different beam further includes at least one of the following:

identifying that said client device is allowed to operatively associate with said different beam; and

identifying that said client device is not allowed to operatively associate with said beam.

17. The method as recited in Claim 9, wherein causing said access point device to force said client device to operatively associate with said different beam further includes:

causing said access point device to send a disassociate message to said client device.

18. The method as recited in Claim 9, wherein causing said access point device to force said client device to operatively associate with said different beam further includes:

causing said access point device to temporarily stop transmitting to said client device using said beam.

19.   A computer-readable medium having computer executable instructions for causing logic to perform acts comprising:

configuring a first device having a smart antenna to selectively allow a second device to operatively associate with a beam downlink transmittable to said second device using said smart antenna;

configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna;

configuring said first device to determine if said associated second device should operatively associate with a different beam downlink transmittable using said smart antenna based on said determined information; and

if said associated second device should operatively associate with a different beam, then configuring said first device to allow said second device to operatively associate with said different beam.

20.   The computer-readable medium as recited in Claim 19, wherein said first device includes an access point device and said second device includes a client device.

21. The computer-readable medium as recited in Claim 19, wherein configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna further includes:

configuring said first device to be capable of receiving uplink transmittable messages through said smart antenna;

configuring said first device to be capable of passively gathering signal parameter information from a plurality of said uplink transmittable messages.

22. The computer-readable medium as recited in Claim 19, wherein configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna further includes:

configuring said first device to be capable of receiving at least one uplink transmittable message through said smart antenna;

configuring said first device to actively probe said second device by outputting a signal suitable for causing said smart antenna to transmit at least one downlink transmittable message over at least said different beam; and

configuring said first device to gather signal parameter information from said least one uplink transmittable message.

23. The computer-readable medium as recited in Claim 22, wherein configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna further includes:

configuring said first device to be capable of receiving a plurality of uplink transmittable messages through said smart antenna;

configuring said first device to actively probe said second device by outputting a signal suitable for causing said smart antenna to transmit at least one downlink transmittable message separately over each of a group of beams comprising said beam and said different beam; and

configuring said first device to gather signal parameter information from each of said plurality of uplink transmittable messages.

24. The computer-readable medium as recited in Claim 19, wherein configuring said first device to determine information from at least one uplink transmission receivable from said second device through said smart antenna further includes:

configuring said first device to be capable of determining information about a current position of said second device relative to said smart antenna.

25. The computer-readable medium as recited in Claim 19, wherein configuring said first device to determine if said associated second device should operatively associate with said different beam downlink transmittable using said smart antenna based on said determined information further includes:

configuring said first device to be capable of comparing said determined information to corresponding beam association threshold information.

26. The computer-readable medium as recited in Claim 19, wherein configuring said first device to allow said second device to operatively associate with said different beam further includes at least one of the following:

configuring said first device to identify that said second device is allowed to operatively associate with said different beam; and

configuring said first device to identify that said second device is not allowed to operatively associate with said beam.

27. An apparatus for use in a wireless communication system, the apparatus comprising:

means for transmitting a plurality of smart antenna beams;

means for determining if a client device that is currently operatively associated with a first smart antenna beam should instead be operatively associated with a second smart antenna beam based on information determined from at least one transmission received from said client device; and

means for forcing said client device to operatively associate with said second smart antenna beam when it is determined that said client device should be operatively associated with second smart antenna beam.

28.   The apparatus as recited in Claim 27, further comprising:

means for passively gathering signal parameter information from a plurality of uplink transmitted messages from said client device.

29.   The apparatus as recited in Claim 27, further comprising:

means for transmitting at least one probe message to said client device over at least said second smart antenna beam;

means for receiving at least one uplink transmitted probe response message in response to said probe message; and

means for gathering signal parameter information from said probe response message.

30.   The apparatus as recited in Claim 29, further comprising:

means for comparing said signal parameter information to corresponding beam association threshold information.

31.   The apparatus as recited in Claim 29, further comprising:

means for transmitting at least one downlink transmitted probe message separately over each of a group of smart antenna beams comprising said first and second smart antenna beams;

means for receiving a plurality of corresponding uplink transmitted prove response messages; and

means for gathering signal parameter information from each of said plurality of probe response messages.

32. The apparatus as recited in Claim 31, further comprising:

means for comparing said signal parameter information to corresponding smart antenna beam association threshold information.

33. The apparatus as recited in Claim 27, further comprising:

means for determining information about a current position of said client device.

34. The apparatus as recited in Claim 27, further comprising at least one of the following:

means for identifying that said client device is allowed to operatively associate with said second smart antenna beam; and

means for identifying that said client device is not allowed to operatively associate with said first smart antenna beam.

35. The apparatus as recited in Claim 27, further comprising:

means for sending a disassociate from first smart antenna beam message to said client device.

36. The apparatus as recited in Claim 27, further comprising:

means for causing said access point device to temporarily stop transmitting to said client device using said first smart antenna beam.

37. An apparatus for use in a wireless communication system, the apparatus comprising:

at least one smart antenna;

at least one transceiver operatively coupled to said smart antenna and configured to send and receive electromagnetic signals using said smart antenna;

logic operatively coupled to said transceiver and configured to selectively allow a second device to operatively associate with a beam downlink transmittable to said second device using said smart antenna, determine information from at least one uplink transmission receivable from said second device through said smart antenna, determine if said associated second device should operatively associate with a different beam downlink transmittable using said smart antenna based on said determined information, and if said associated second device should operatively associate with a different beam then allow said second device to operatively associate with said different beam.

38. The apparatus as recited in Claim 37, wherein said logic is further configured to passively gathering signal parameter information from a plurality of said uplink transmittable messages received by said transceiver using said smart antenna.

39.   The apparatus as recited in Claim 37, wherein said logic is further configured to:

actively probe said second device by causing said transceiver to output a signal to said smart antenna that causes said smart antenna to transmit at least one downlink transmittable message over at least said different beam; and

gather signal parameter information from said least one uplink transmittable message received by said transceiver using said smart antenna.

40.   The apparatus as recited in Claim 39, wherein said logic is further configured to:

actively probe said second device by causing said transceiver to output a signal suitable to said smart antenna that causes said smart antenna to transmit at least one downlink transmittable message separately over each of a group of beams comprising said beam and said different beam; and

gather signal parameter information from each of said plurality of uplink transmittable messages received by said transceiver using said smart antenna.

41.   The apparatus as recited in Claim 37, wherein said logic is further configured to:

determine information about a current position of said second device relative to said smart antenna.

42.   The apparatus as recited in Claim 37, wherein said logic is further configured to:

compare said determined information to corresponding beam association threshold information.

43.   The apparatus as recited in Claim 37, wherein said logic is further configured:

selectively identify that said second device is allowed to operatively associate with said different beam.

44.   The apparatus as recited in Claim 37, wherein said logic is further configured:

selectively identify that said second device is not allowed to operatively associate with said beam.

45. A wireless communication system comprising:

at least one client device; and

at least one access point device operatively coupled to said client device over a wireless link and therein capable of transmitting a plurality of smart antenna beams, determining if said client device that is currently operatively associated with a first smart antenna beam should instead be operatively associated with a second smart antenna beam based on information determined from at least one transmission received from said client device, and causing said client device to operatively associate with said second smart antenna beam when it is determined that said client device should be operatively associated with second smart antenna beam.

46. The system as recited in Claim 45, wherein said access point device is further configured to gather signal parameter information from a plurality of uplink transmitted messages from said client device.

47. The system as recited in Claim 45, wherein said access point device is further configured to:

transmit at least one probe message to said client device over at least said second smart antenna beam;

receive at least one uplink transmitted probe response message in response to said probe message; and

gather signal parameter information from said probe response message.

48. The system as recited in Claim 47, wherein said access point device is further configured to compare said signal parameter information to corresponding beam association threshold information.

49. The system as recited in Claim 47, wherein said access point device is further configured to:

transmit at least one downlink transmitted probe message separately over each of a group of smart antenna beams comprising said first and second smart antenna beams;

receive a plurality of corresponding uplink transmitted prove response messages; and

gather signal parameter information from each of said plurality of probe response messages.

50. The system as recited in Claim 49, wherein said access point device is further configured to compare said signal parameter information to corresponding smart antenna beam association threshold information.

51. The system as recited in Claim 45, wherein said access point device is further configured to determine information about a current position of said client device.

52.   The system as recited in Claim 45, wherein said access point device is further configured to perform at least one of the following:

identify that said client device is allowed to operatively associate with said second smart antenna beam; and

identify that said client device is not allowed to operatively associate with said first smart antenna beam.

53.   The system as recited in Claim 45, wherein said access point device is further configured to send a disassociate from first smart antenna beam message to said client device.

54.   The system as recited in Claim 45, wherein said access point device is further configured to temporarily stop transmitting to said client device using said first smart antenna beam.